

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Allowable Subject Matter

The allowance of claims 66 and 67 is noted with appreciation.

Claim Rejections - 35 U.S.C. § 101

Claims 31-62 have been rejected to as being directed to a non-statutory subject matter. According to the Examiner, the claims are directed to an inventive algorithm couched in method, computer and other implemented apparatus, and computer software based claims, which state the inventive gist as computations per se, to an algorithm per se, that lacks the algorithm results implemented into the real physical world.

Specific exception is taken to the Examiner's contention that the subject matter of the claims does not provide a tangible result. Reconsideration and withdrawal of the rejections under 35 U.S.C. § 101 are respectfully requested for at least the following reasons.

The present application describes a method having particular application in the field of electromagnetic surveys for determining whether or not an area contains a subterranean hydrocarbon reservoir. The disclosed methodology is orientated towards improving the methodology of determining the presence of hydrocarbon in a subterranean reservoir. The real world benefit of such methodology should be immediately evident.

The method of claim 1 acts upon survey data and involves a comparison of results data sets to determine if hydrocarbon is present. This determination clearly has real word benefit by identifying reservoirs that contain hydrocarbon as opposed to water. This result is useful, tangible and concrete.

As set forth in the guidelines referenced by the Examiner,

... Similarly, the claimed invention in *Arrhythmia* "constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it corresponded to a useful, concrete and tangible thing – the condition of a patient's heart."

and

... *State Street*, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02 ("the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces "a useful, concrete and tangible result" – a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.")

Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, Annex II, B. iii. (pages 38-39).

Akin to *State Street*, the method of claim 1 provides a determination if hydrocarbon is present that is momentarily fixed for subsequent recording, reporting or other use. To further clarify this in the claims, without limiting the scope thereof, the last clause of claim 31 has been amended to recite "comparing the first and second results data sets to provide a determination if hydrocarbon is present." Claims 36-38, 43-45, 50, 55 and 59-62 have been similarly amended.

Regarding claims 36, 43, 59 and 60, these claims have been amended to recite a computer program product bearing machine readable instructions stored on a computer-readable media. This should render moot the additional objection raised by the Examiner in respect of these claims.

For at least the foregoing reasons, the rejections under 35 U.S.C. § 101 should be withdrawn.

Claim Rejections - 35 U.S.C. § 112

Claims 31-65 have been rejected as being indefinite. Regarding claims 31-62, the rejection should be withdrawn for the reasons discussed above in respect of the rejection under 35 U.S.C. § 102.

Regarding claims 63-65 and 68-71, these claims have been amended to place them in a more acceptable form that renders moot the rejection.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

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